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Disruption of Ocean Plate Stratigraphy in the Jurassic Accretionary Complex, Central Japan

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The Jurassic accretionary complex in central Japan is composed mainly of various types of mélanges, broken formations, turbidites and tectonic slabs. These are the products of progressive fragmentation and mixing of ocean plate stratigraphy (OPS) during the ocean plate subduction along the eastern margin of the Asian continent. The OPS is composed of greenstone, limestone and chert of Permian age, carbonaceous - siliceous claystone of Permian - Triassic boundary age, chert of Triassic - Early Jurassic age, siliceous mudstone of Early Jurassic - earliest Cretaceous age and turbidite of Middle to earliest Cretaceous age in ascending order. The OPS was detached from the ancient oceanic plate along the decollement or detachment fault, which developed in a layer of carbonaceous-siliceous claystone of P-T boundary. Progressive fragmentation and mixing of the OPS occurred along the decollement and successively developed thrust faults during the accretionary process. Neighboring rocks along the faults mixed one another. Most of these rocks became various sized clasts of the mélanges in the muddy matrices which are made of muddy flysch and P-T boundary claystone. Large sized slabs in the mélanges were the remains of the fragmentation of the accreted OPS.

Keywords: mélange, accretionary complex, Ocean Plate Stratigraphy, Jurassic, Japan, disruption, P-T boundary

References

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